

With the Author's
Counts.

SURGICAL REPORTS,

BY

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SENIOR SURGEON TO THE MEATH HOSPITAL AND COUNTY OF DUBLIN INFIRMARY ;

EX-PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND ;

ETC., ETC.

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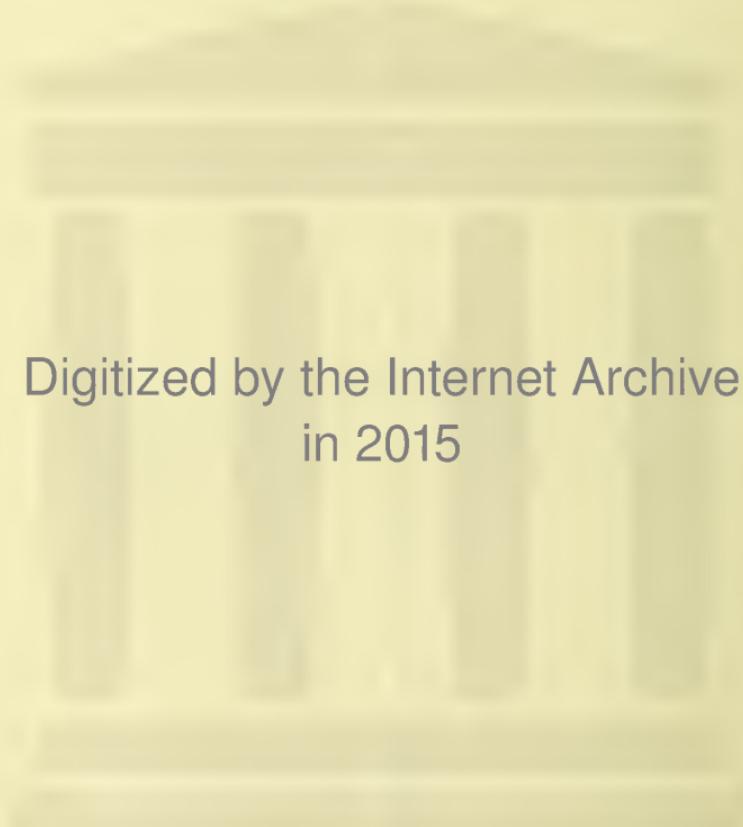
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S U R G I C A L R E P O R T S .

- I.—TIGHT ORGANIC STRICTURE OF THE MALE URETHRA; A LARGE PORTION OF A CATHETER LODGED IN THE BLADDER; THE STRICTURE FORCIBLY DILATED; THE FOREIGN BODY EXTRACTED; RECOVERY.
- II.—A PORTION OF A GUTTA-PERCHA BOUGIE BROKEN OFF IN THE BLADDER, CALCULOUS FORMATION AROUND IT; A MODIFICATION OF "ALLARTON'S LITHOTOMY;" RECOVERY.
- III.—NINE INCHES AND A HALF IN LENGTH OF A GUM ELASTIC CATHETER LODGED IN THE MALE BLADDER, SURROUNDED BY PHOSPHATIC DEPOSIT; A MODIFICATION OF "ALLARTON'S LITHOTOMY;" RECOVERY.
- IV.—PATIENT AGED TWENTY-SIX YEARS; A SMALL LITHATE CALCULUS, WITH AN OXALATE OF LIME NUCLEUS; LITHOTRITY; RECOVERY.
- V.—PATIENT AGED FIFTY-ONE YEARS; SMALL LITHATE CALCULUS; LITHOTRITY; RECOVERY.

ALTHOUGH substances of the most varied forms and composition have been found in the female bladder, demanding surgical interference for their removal, few foreign bodies are met with in the

male viscus, with the exception of portions of bougies, or catheters. The extraction of these from the female is an easy procedure compared with their withdrawal from the male patient. The explanation of this is simple, when we consider the anatomy of the urethra in women, its great dilatability, and its short and slightly curved course. The length of time a foreign substance has remained in the bladder influences, in a great measure, the surgeon in bringing his practical knowledge to the aid of the sufferers. The knife, or lithotrite, is usually required when the substance has continued long enough to become the nucleus of phosphatic deposit. When called upon to relieve a male patient suffering from a foreign body in the urinary bladder, the practical surgeon must earnestly consider all the features of the case before rashly proceeding to any operation. He should endeavour to ascertain the nature of the substance, whether tough or brittle, its shape, the length of time it has lodged in its unnatural situation, and, lastly, the condition of the bladder as affected by its presence. No doubt, in some cases where the urethra is large, and the foreign body small, it may at once be seized by a lithotrite and taken out, or if friable it may be broken up, and allowed to be washed away with the urine, like a calculus. This is on the supposition that the state of the bladder is healthy. But, on the other hand, if it be tough, and incapable of being acted upon by the lithotrite, and that it is lying in a viscous inflamed and irritable, then the surgeon should not delay to remove it by the knife. For the removal of foreign bodies which cannot be extracted along the urethra, lithotomy through the middle line of the perineum is, *par excellence*, the operation to be chosen. The highest authorities agree on this point. Mr. Erichsen says—"This is more safely done by the median than by the lateral operation of cystotomy." Ashurst states, when treating of foreign bodies in the bladder—"In the male, however, it is usually necessary to resort to lithotomy (if the nature of the body admit of its being crushed), or to lithotomy, the *median* being in such a case the preferable operation." Again, Mr. Bryant writes—"In adults, possibly, the median operation may be chosen when the foreign body is not large."

There is a difference of opinion among surgeons as to the best way of reaching the staff, and by it the bladder, in central lithotomy. Allarton plunges his knife at once, with its back to the rectum, into the membranous portion of the urethra, placing the point of the bistoury half an inch in front of the anus. In the old "marian"

operation a cut was made on the right or left of the raphe upon the staff, beginning below the scrotum, and terminating an inch above the anus. Sir Henry Thompson says—"Respecting the modes of making the incisions, I prefer dissecting from the skin inwards to the staff, as in other operations, to the method by transfixion." He does not mention where he begins his incision through the skin.

Mr. Erichsen recommends a rectangular staff, resembling Buchanan's, to be used, and considers that "the surgeon can judge of the exact point where to enter the knife (directing it so as to open the groove just below the angle) which he cannot do with the curved staff."

I consider the recommendation of Sir H. Thompson to cut from the skin inwards most useful, particularly when the perineum is deep. In such a case the whole blade of the knife would be swallowed up if driven to the staff, according to Mr. Allarton's advice, and the heel of the blade would be brought to bear on the tough skin of the raphe; whereas the free division of the integument, in the first instance, facilitates the further separation of the structures to be cut through.

The operation I have four times successfully performed, and which I take the liberty of suggesting to others, is a combination of Allarton's and Thompson's; but differing slightly from both. It is briefly described as follows:—The staff, grooved on its convexity (and as large as possible) having been introduced, kneeling in front of the patient, I insert the forefinger of my left hand into the rectum with its palmar surface upwards, and fix it against the staff at the apex of the prostate gland. I then push Allarton's bistoury about a quarter of an inch in depth with its back to the bowel, half an inch anterior to the anus in the raphe, along which I then cut one inch and a half in length towards the root of the scrotum, freely dividing the skin, and superficial fascia. This having been done, I return the point of the knife to its first starting place, and quickly plunge it to the staff at the apex of the prostate, making sure that I have freely opened the urethra, by moving the bistoury in the groove of the staff. I then cut forwards to the extent of the superficial incision. Still keeping the staff steadied with the point of the finger in the bowel, I introduce a long steel probe along the groove of the instrument into the bladder. Then having withdrawn the finger from the rectum, I introduce it on the probe, and dilate the prostate by insinuating the finger with a rotatory motion.

This being accomplished, the forceps is passed in on the finger, the foreign body caught, and at once extracted. The following cases of foreign bodies in the bladder, and the surgical exertions for their removal, may be interesting to the profession:—

CASE I.—Tight Organic Stricture of the Male Urethra; a large Portion of a Catheter lodged in the Bladder; the Stricture forcibly dilated; the Foreign Body extracted; Recovery.

T. C., aged forty-three years, a married man, had suffered for three years from tight organic stricture of his urethra about four inches from its orifice. It was caused, apparently, by an injury received nine years before. He had it dilated on several occasions by different modes of treatment, but it always showed a great tendency to close again. He had been three times attacked with complete retention of urine, and was with great difficulty relieved. He was in the habit of introducing bougies himself, and allowing them to remain in the passage for some hours, and for the last two years felt satisfied with his own treatment without applying to a surgeon. He was never able to force a bougie larger than No. 4 through, or rather into the stricture.

On the 28th June, 1872, he came under my observation, and gave the following details:—He had cut off about five inches and a-half of a French bulbous catheter, which he forcibly pushed into the stricture, where he left it so tightly grasped, that he thought it impossible for the instrument to come out, or, on the other hand, to glide backwards into his bladder. He went out for a drive of two hours' duration, and on returning home discovered to his great alarm that, instead of remaining as he had placed it, the piece of catheter had worked its way through the stricture, and lay partially in his urethra and bladder. I thus found him in a state of great anxiety, complaining of acute pain in the region of the bladder, with a constant desire to pass water, which dribbled away on each exertion to avoid it. Pressure on his perinæum gave intense agony. Having endeavoured to calm his mind, I had him placed immediately in a warm bath, and administered a draught containing tincture of hyoscyamus, liquor potassæ, laurel water, and camphor mixture. After remaining in the bath for twenty minutes I had him removed to bed, and told him I would endeavour to extract the piece of the catheter early the following day. He was desired to repeat the warm bath in the meantime, as also the draught at ten o'clock p.m.

Here was obviously a most anxious case, and one that called for the best consideration prior to the adoption of operative measures. The stricture forbade the introduction of a forceps or lithotrite, to seize the foreign body, and the same difficulty was a bar to my passing a fair-sized staff, on which I might cut into the bladder. After having carefully weighed all the difficulties, I determined in the first instance to dilate the stricture, and then with a lithotrite catch and extract the piece of the catheter; but should I fail in this, at once to cut into his bladder and take it out.

June 29th.—Assisted by my friends Mr. Wharton and Dr. M'Cormick, I had the patient placed fully under the influence of chloroform; I then introduced "Holt's Dilator," and burst the stricture; on the withdrawal of the dilator only three or four drops of blood followed. I then passed a No. 9 silver catheter, to be certain that a way sufficiently large was made for a lithotrite, and also to push on the foreign body fairly into the bladder, should it be in any degree lodged in the prostatic portion of the canal. The stopper was allowed to remain in the catheter, to prevent the urine escaping, and as I passed the metallic instrument I distinctly felt the offending substance. I then rapidly withdrew the catheter, and replaced it by a small-sized lithotrite, which was with the greatest facility introduced. With this I felt the piece of the catheter lying to the left side of the patient's bladder, and having opened the blades of the lithotrite, I was fortunate enough to grasp it and extract it slowly, but without difficulty. I then drew off his urine, introduced a quarter grain morphia suppository into the rectum, and placed him comfortably in bed, with warmth to his feet.

June 30th.—He had a quiet night, and was free from vesical irritation. From this date he made a rapid recovery, and was about his business the sixth day after the operation. Probably no case could be presented more suitable to the "immediate plan" of treating stricture, and certainly the scientific course to adopt was the one which I pursued previous to resorting to the extraction of the foreign body by a cutting operation. The method I adopted was crowned with the most gratifying success. Plate IX., Fig. 2, gives a good representation of the piece of the catheter removed.

CASE II.—*A Portion of a Gutta-Percha Bougie broken off in the Bladder; Calculous Formation around it; a Modification of "Allarton's Lithotomy;" Recovery.*

J. M., aged twenty-five years, was admitted into the Meath Hospital under my care, May 8th, 1870. He had suffered from organic stricture for more than twelve months, and had been in the habit of treating himself by introducing bougies. About seven months previous to admission he had constructed a bougie from a piece of gutta percha, and on the first occasion that he passed it into his bladder a portion about three-quarters of an inch in length broke off when he was withdrawing the instrument, and this subsequently became the nucleus of a stone. When he came under my observation he was suffering from all the symptoms of a calculus in the bladder, and his health was greatly broken down. He got very little rest, his urine was loaded with pus, and contained blood. A No. 5 sound was the largest that the stricture would admit, and with this the foreign body was easily found. The contracted state of the urethra, and the highly inflamed condition of the bladder in a man so debilitated, prohibited the idea of removing the stone and foreign body with a lithotrite. I determined to cut it out.

Operation.—May 13th.—His rectum having been cleared out by a tepid water enema, at 10 o'clock a.m. he was brought into the operation theatre, and put fully under the influence of chloroform. He was quickly tied, and held in the usual position for lithotomy. A No. 5 staff grooved on its convexity was introduced, and firmly held by my colleague, Mr. Wharton. Then, kneeling, I inserted the forefinger of my left hand into his rectum with its palmar aspect upwards, and its point steadily pressing on the staff at the apex of the prostate gland. I then pushed Mr. Allarton's knife with its back towards the bowel a quarter of an inch deep, striking the perineum half an inch in front of the anus. I then cut forwards along the raphe to the extent of one inch and a half, dividing the skin and superficial fascia. I next fixed the point of the bistoury where I commenced my incision, and plunged it (with the cutting edge still away from the rectum) deeply until I lodged its point fairly in the groove of the staff at the membranous portion of the urethra. Having made certain that I had safely entered it, I cut forwards to the extent of the superficial incision. I then laid aside my knife, but still keeping my left forefinger in the bowel,

I passed in through the wound a long steel probe which I caused to glide along the groove of the staff into the bladder, proving that I was in the proper course by striking the end of the probe sharply against the stop at the extremity of the staff. And here let me recommend in the strongest manner the advantage of using a staff constructed with this abrupt resisting point in every mode of lithotomy, whether the surgeon hits it with the point of his knife in the lateral operation, or with the end of the probe as in the procedure under consideration; it proclaims that he has travelled the direct route, and is safely in the bladder. I then had the staff removed, and at the same time withdrew my finger from the rectum. Still firmly holding the probe with my right hand, I inserted my left forefinger (which had served whilst in the bowel to direct the knife in safety to the staff) along the probe into the bladder, and by rotating it two or three times I largely dilated the prostate. I felt the foreign body lying at the bottom of the viscus, below the level of my finger. I then took out the probe, and on my finger insinuated a small lithotomy forceps with which I quickly seized the stone, and brought out a large portion; it broke, however, under the grasp of the forceps, so that I was obliged to remove the remainder of it by a second introduction of the instrument. I was aided by a careful washing out of the bladder by means of a strong syringe. The patient was now placed in a well-warmed bed, and had a morphine suppository passed into his rectum, and directions were given to keep him as dry as possible by placing folded sheets under his buttocks as often as required. The amount of bleeding was remarkably trifling, and the wound needed no dressing.

May 14th.—He had a most refreshing night, was free from the constant calls to micturate which disturbed him before the operation; his urine flowed freely through the wound, and his pulse counted only eighty; he did not suffer from any febrile symptom.

May 16th.—He expressed himself as greatly relieved, all feeling of bladder irritation had subsided, and the urine passed constantly through the wound. It would be tedious to relate the daily condition of the patient; he improved in health rapidly, the urine began to flow through the urethra on the sixth day after the operation, the wound closed in the most healthy and satisfactory manner, and he left the hospital cured four weeks after the removal of the foreign body.

A very good sketch of the piece of the bougie surrounded by the calculous formation is given in the lithograph, Plate IX., Fig. 3, by Forster & Co., drawn by his accomplished artist, Mr. Tomsohn.

CASE III.—Nine inches and a half in length of a Gum Elastic Catheter lodged in the Male Bladder and surrounded by Phosphatic Deposit ; a Modification of Allarton's Lithotomy ; Recovery.

J. T., aged thirty-eight years, by trade a plumber, was admitted into the Meath Hospital, under my care, November 28th, 1872. He had suffered from stricture of the urethra for two years previous to his admission into hospital, and had himself been in the habit of passing bougies and catheters occasionally during the last eighteen months of that period. Nine weeks prior to coming under my notice, in withdrawing a gum elastic catheter (No. 6), which he had introduced, it broke across, leaving one inch and a half of the instrument between his fingers and thumb. The larger portion he immediately tried to take out of his urethra, but failed in the attempt, and, in about an hour afterwards, it slipped into his bladder. For two days subsequently he felt no annoyance, and was able to follow his usual occupation. On the third day, however, after the accident, he felt great pain during, and at the termination of, micturition in his glans penis ; his urine was bloody, and any sudden motion increased his suffering. He placed himself under the care of a surgeon who commenced to dilate the stricture before attempting the removal of the foreign body ; but the patient became anxious for speedy relief, and left the hospital while he was undergoing treatment. He then applied to my friend Dr. Trimble, of Castlebellingham, who detected the foreign substance in his bladder, and recommended him to come to me.

On admission to the hospital, I found him suffering from frequent calls to make water, so often as ten times during the night. His urine was bloody, and contained pus and ropy mucus. One small piece of the exterior of the catheter had been expelled, and numerous fine fragments of phosphatic deposit also came away.

November 29th.—I sounded him with Sir Henry Thompson's sound, and soon felt the catheter which, on being struck, gave the sensation as if it were more or less encrusted with calculus matter. I ordered him to remain in bed, and prescribed sedative medicine, with diluent drinks. In consultation with my colleagues, it was considered a case not suitable for an attempt to extract the foreign body by the urethra. The catheter, it was considered, might break (if caught in a lithotrite) into pieces, which could not be washed away with the flow of urine, but remain to form the foundation of other deposits. And even if it did not

thus become disintegrated, it could not be drawn through the urethra in its coated condition without lacerating the canal to a dangerous extent. The highly inflamed state of his bladder also prohibited such instrumental interference. I therefore decided upon performing the operation which I have above described, and which I strongly recommend. I operated on the morning of December 4th, and removed the portion of the catheter, a faithful delineation of which from the pencil of Mr. Tomsohn, and lithographed by Forster & Co., is to be seen, Plate IX., Fig. 1.

The operation was done under the influence of aether, which was kindly administered by my colleague Mr. Smyly, in a very efficient manner.

The patient made a very satisfactory recovery. The urine passed through the penis on the fifth day, and he left the hospital, with the wound healed and in fine health, on the 7th January, 1873.

Remarks.—The accident of a catheter or bougie slipping backward into the bladder is by no means so uncommon as is generally supposed; and every surgeon should carefully examine instruments prior to using them. Age renders them brittle and unfit; and, even when their condition is sound, the utmost precaution should be adopted (when allowing them to remain in the urethra) to secure them in such a manner that they cannot recede, or glide forwards from the canal. When a portion of a soft bougie or catheter is for a short period lodged in the bladder, it is not an easy procedure to feel it with a sound; and this fact is alluded to by Mr. Fleming, a gentleman who has devoted much attention to injuries and diseases of the urinary organs, in his description of a case in which a bougie—which had been introduced and left in the urethra—escaped into the bladder.—*Dub. Hosp. Gazette*, Sept. 1, 1858. A very interesting case is reported by my friend, Mr. William Stokes, Professor of Surgery in the Royal College of Surgeons, in the first number of the *Irish Hospital Gazette*. This was a case of the removal of an entire gum elastic catheter from the bladder by Allarton's operation.

CASE IV.—Patient aged Twenty-six Years; a small Lithate Calculus, with an Oxalate of Lime Nucleus; Lithotritry; Recovery.

H. B., a cavalry officer, aged twenty-six years, consulted me November 15th, 1871. He had suffered for fourteen months previously from great pain after micturition, and irritability of the

bladder. Whenever he rode on horseback his urine became bloody, and even when blood was not apparent to the unaided eye the fluid had a smoky hue, and was turbid. Prior to this date he had enjoyed excellent health, and was able to take the most active exercise, in addition to the ordinary duties of his regiment. He was now obliged, however, to go continually on the sick list, feeling himself disabled for duty, and his sufferings were so great that he contemplated throwing up his profession. He had been under the care of three different surgeons, who from time to time prescribed medicines calculated to alleviate the irritable condition of his bladder, and he had been sounded by each of them without detecting the presence of a stone. He had a capacious urethra, and bore very well the introduction of an instrument. I passed Sir Henry Thompson's sound into his bladder with ease, and after turning its beak from side to side without striking the calculus, I at last hit it on turning the point of the sound down behind the prostate close to the neck of his bladder. The click which was given led to the supposition that its formation was hard, but that its size was not considerable. In this examination I was ably assisted by Surgeon-Major Gilborne, who had given his opinion that the gentleman suffered from stone. And here I may say a word respecting Sir H. Thompson's sound, which I consider every surgeon who treats urinary diseases should have in his possession. I believe many stones have been discovered by its use which would have escaped the search made with the ordinary sounds constructed with large curves. A calculus of small size may lie undiscovered beneath the long curve of an instrument, while the short bend of Thompson's sound can hardly fail to find it when turned completely round in the bladder. I should add that the cylinder attached to the handle not only gives a most convenient hold of the instrument, but intensifies the noise if it strikes the foreign body, even in the most gentle manner. I told the patient to remain in the recumbent position as much as possible, and I prescribed a mixture containing tincture of hyoscyamus, four drachms; laurel water, two drachms; camphor mixture eight ounces—to take an ounce every third hour; whilst I desired that he should drink every day a pint of decoction of triticum repens.

November 18th.—*First Sitting.*—Having placed him on a low bed, with a hard hair mattress under him, two assistants held his legs flexed in the manner usually fixed for lithotomy. I introduced Sir Henry Thompson's flat-bladed lithotrite, and soon caught the

stone, which measured half an inch in the diameter which was seized. I crushed it once, and withdrew the instrument. He bore the operation well. I then put a quarter grain morphine suppository into his rectum, and gave him a glass of champagne. He was instructed to remain on his back in bed, and to make water in that posture; to have plenty of oatmeal tea as a drink, and chicken broth during the day. I visited him on the evening of same day, and was told that he felt relief, and was less frequently obliged to micturate. The urine was not bloody, and no detritus had come away. I then ordered him a draught containing twenty grains of hydrate of chloral.

November 19th.—He had passed a restless night, not from pain or vesical irritation, but he felt nervous and wakeful, and a small quantity of *debris* had been expelled, weighing five grains. He was ordered to remain quiet in bed, and to partake of the same diet as the day before, the chloral draught to be repeated at bedtime.

November 20th.—He had a good night, and felt greatly refreshed. This morning I washed out his bladder with Clover's apparatus, but with little effect, the amount of detritus being almost *nil*.

November 22nd.—*Second Sitting.*—I used the same instrument as at the first crushing, and caught two fragments, each measuring about a quarter of an inch in diameter, and I broke them with ease. The lithotrite on this occasion brought out between its blades a large quantity of pulverized stone. On visiting the evening of this day I found that a large amount of debris, weighing twenty-two grains, had passed out. The greater portion came away with a rush on his making water, about two hours after the operation. The chloral draught was taken again this night.

November 26th.—He felt very much relieved, having slept soundly, but no fragments passed away.

November 27th.—I explored his bladder with Thompson's sound, and was unable to feel any piece of calculus. I then permitted him to sit up in an arm-chair, and to have some chicken for dinner, with a glass of champagne.

November 28th.—He had a good night, and no detritus came away.

November 30th.—He was so well, and free from all irritation, I allowed him to go to Bray for change of air, where he remained for ten days.

December 11th.—He returned to town greatly improved in

general health, but his urine was not clear, and he felt a sharp pain at times whilst expelling the last drops of water. I then sounded him again under the influence of chloroform, assisted by my friends Mr. Wharton and Surgeon-Major Gilborne. On this occasion I used a flat-bladed lithotrite in sounding, as I could with ease, and at once, crush any fragment, and as I should escape, by its means, the trouble and consequent irritation of introducing the second instrument. I was unable to find any piece of calculus.

December 19th.—*Third Sitting.*—Up to this date he progressed very well, was able to drive out every day without pain, and retained his water for four hours and a-half. There was no haematuria, but the urine continued rather opaque, and he noticed occasionally a sudden check in the stream. I made him empty his bladder, and then introduced a small flat-bladed lithotrite, and almost instantly caught a small fragment, and reduced it to powder. This piece measured one-eighth of an inch, as indicated on the scale of the lithotrite, and was brought out in the jaws of the instrument. From this date the urine became perfectly transparent, all symptoms of irritation ceased, and my patient made a rapid recovery. In a letter dated January 4th, 1871, he says, “I feel now perfectly well, and rode out with my regiment for two hours this morning.” The weight of all the detritus preserved was twenty-eight grains. A small triangular nucleus of oxalate of lime was found in the debris passed on the 22nd of November.

CASE V.—Patient aged Fifty-one Years; Small Lithate Calculus; Lithotrity; Recovery.

W. S., aged fifty-one years, had suffered from frequency of passing water for three months previous to coming under my observation. The first symptom of irritation he perceived was immediately after a sudden exertion in pursuing a run-away horse. He then expelled bloody urine, and felt great uneasiness in his bladder, with pain at the extremity of his penis. He was healthy-looking, and passionately fond of horse exercise, but latterly was unable to ride for the space of half-an-hour without dismounting to micturate. His urine had a smoky tinge when the red colour subsided.

November 7th, 1871.—Assisted by Mr. Wharton, I sounded him, and detected a calculus, which from the click imparted by striking Sir Henry Thompson's sound against it led us to infer that the stone was tolerably hard, but of small size.

November 9th.—*First sitting.*—I placed him in the position for lithotomy, on his bed, with his buttocks raised by means of a pillow. He had been directed to retain his water for two hours. I then slowly introduced Thompson's flat-bladed lithotrite, slightly heated and well oiled, and soon felt the stone lying at the right side of his bladder. I immediately separated the blades of the instrument, easily caught the calculus, and crushed it. I found it so difficult to screw home the male blade that it was evident a large quantity of detritus lay between the blades, and, without attempting to break a second piece that day, I withdrew the instrument. In so doing a good deal of pain was produced by its increased size, particularly at the orifice, which I was obliged to slightly lacerate in extracting the beak of the lithotrite. I placed a quarter grain morphine suppository in his rectum, ordered him a glass of champagne, and to have oatmeal tea to drink *ad libitum*, with chicken jelly every third hour.

November 10th.—He passed a good night; no fever; several small fragments came away with the urine, which he expelled in the recumbent position.

November 11th.—Very little debris found, but he had a tranquil night.

November 12th.—He had more frequent calls to make water, and a small amount of detritus got rid of. Ordered to have a chloral draught at night.

November 13th.—He slept well, and felt most refreshed. A good deal of debris, chiefly in fine particles, passed off. From this date to the 17th he was able to sit up, and had but slight inconvenience; his urine, however, was opaque, and he felt occasionally at the end of micturition a sharp sting.

November 17th.—*Second sitting.*—I passed a small-sized flat-bladed lithotrite, and seized a fragment measuring a quarter of an inch. I reduced it to powder, and brought it out between the blades.

November 25th.—I washed out his bladder with Clover's instrument; but the result was but a trifling amount of debris.

November 27th.—*Third sitting.*—I passed in the flat-bladed lithotrite, and after searching for a minute or two, I seized a fragment of stone by turning the curve of the instrument downwards. It measured one-eighth of an inch. I screwed home the lithotrite, and brought out the disintegrated particles in the female blade.

November 29th.—The patient felt very much improved in

health. Since the last crushing he had passed a considerable quantity of detritus, along with two large fragments, one weighing four grains, the second two grains and a half.

December 1st.—He was allowed to go out for a short walk. On his return, in less than an hour, he felt great urgency to pass water, and whilst so doing two large pieces of calculus were expelled with force. It should have been noticed that up to this date his urine never became perfectly limpid.

December 9th.—*The fourth and last sitting.*—I introduced the flat-bladed lithotrite again, and grasped a fragment which the index of the lithotrite marked to be less than one quarter of an inch in the diameter caught. It was immediately reduced to fine detritus, and brought out between the blades of the instrument.

After this operation his urine daily became transparent. He lost all vesical irritation, and left Dublin quite well.

On the 8th January, 1872, I received a letter from him in which he states—"I never was better in all my life, no stony symptoms of any sort remaining, and the water still continues perfectly clear. I have given it a fair test, having been constantly hunting since." The aggregate weight was thirty-six grains. A remarkable feature in this case was that although the stone had increased to a considerable size, still the patient had only been suffering from irritation of his bladder for two months previous to its detection.